

# The effect of financial sustainability on market value – A study in a sample of firms listed in Iraq's securities market

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## Abstract

The study aimed at exploring the effect of financial sustainability on market value in the firms that are listed in Iraq's securities market for duration (2015- 2019) where the effect of financial sustainability was measured by a group of indicators, the Panel Data Method was used and data of (31) firms listed in Iraq's securities market for duration (2015- 2019) were relied upon. The study concluded that most firms were financially sustained, that is, the study concluded with the existence of direct significant effect of financial sustainability of the firms on each of (return on assets, financial self-sufficiency, and debt ratio), inverse significant effect on (availability of operating capital factor) and insignificant inverse effect on (return on investment). The study wrapped up with a group of recommendations, the most important of which are: the necessity of specifying a unit of measurement in Iraq's securities market to measure the financial sustainability of firms because it provides an acceptable level of financial solvency, cash, profitability, the eligibility for raising a loan and other financial indicators such as achieving long-term financial balance, and therefore it wards off future problems in the market, and also the necessity of considering the market value by management boards in the firms that are the sample of the study for its effect on market indicator and working on raising it effectively through considering financial sustainability for its direct effect that helps in raising market value.

## Keywords

Low Income Community, Social Interaction, Housing.

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## Introduction:

Researchers and policy makers are trying through applying financial sustainability principles to face the new challenges in economic development and resources long-term management, and the reason behind exerting efforts in this area is the great financial disturbances in the first decade of the 21st century which started to undermine the traditional financial theories and pushed towards using alternative approaches in firms' principles of financial and organizational management. That is, the inefficiency of risk management and value maximization policies will not protect managers and investors from losses but the concept of financial sustainability may balance profits with risks in decision making process, with considering the firms that are listed in the securities market the engine of economic development wheel and this is done by attracting owners of surplus and idle funds to invest in shares and bonds that are offered by these firms in securities market which in turn contributes to the convenient allocation of these funds for investment in the most profitable areas which achieves a bunch of economic profits for these firms and which, in turn, reflects on state's economy. Starting from this point, securities firms of different kinds and sizes started to search for ways to enhance this sustainability, and it turned out that market value is the optimal solution for enhancing it.

Today's business environment requires introducing the concept of value oriented management which aims at firms value maximization, it's undoubted that these firms strive for development and continuation, and for sure, achieving this depends on the ability of the management in these firms to set ambitious goals, one of which is firm value maximization, i.e. maximizing share price in securities market. Hence, maximization of market value has become amongst the most important goals that firms strive to achieve and reach to guarantee maximizing their fortunes. Besides, shares holders aims at investing their funds to achieve the greatest possible return, thus, firms become obliged to achieve a return that exceeds the cost of the invested capital, and this is to meet the requirements of shares holders, and they have to make use of available resources in a way that guarantees maximizing firm value and maximizing shares holders value.

### **First subject: study methodology and previous studies**

#### **First theme: study methodology**

##### **Firstly: study problem:**

The study problem revolves around how to maximize market value of the firms that are listed in Iraq's market, the degree of financial sustainability effect on this value, and what role financial sustainability indicators represented in (return on assets, availability of operating capital factor, financial self-sufficiency, return on investment and debt ratio) can play in maximizing this value. In this study, we work on answering this problem through this question:

#### **Does financial sustainability affect market value of the firms that are listed in Iraq's securities market?**

From this point, the features of the problem are revealed and they can be framed and expressed through the following sub-questions:

- 1- What is financial sustainability? And what are financial sustainability indicators of Iraq's securities market? And what are their levels?
- 2- To what degree does financial sustainability affect market value of the firms that are listed in Iraq's securities market?
- 3- What is the concept of market value? And what are the factors that affect it?

##### **Secondly: importance of the study:**

The importance of the study is represented in the following:

- 1- The study linked two relatively-new factors that have not been linked before to the researcher's best knowledge.

- 2- The study helps in manifesting the strengths and weaknesses of the firms that are listed in Iraq's securities market and it enhances strengths and cures weaknesses in these firms.
- 3- The importance of the area that the study subject will be applied in (the firms that are listed in Iraq's securities market) since the sample contributes to raising the level of Iraq economy.

**Thirdly: study objectives**

The study aims at achieving a group of main objectives, the most prominent of which are:

- 1- Studying the relationship between financial sustainability and market value of the firms that are listed in Iraq's securities market.
- 2- Identifying financial sustainability indicators that can be applied in Iraq's securities market.
- 3- Building a theoretical frame for the study variables through getting familiar with directly related literatures.

**Fourthly: study hypotheses:**

Based on the questions that came in the study problem, the following hypothesis will be examined: financial sustainability effect on market value of Iraqi securities firms.

**First main hypothesis:**

There is a significant effect of statistic indication between return on assets and market value.

**Second main hypothesis:**

There is a significant effect of statistic indication between availability of operating capital factor and market value.

**Third main hypothesis:**

There is a significant effect of statistic indication between financial self-sufficiency and market value.

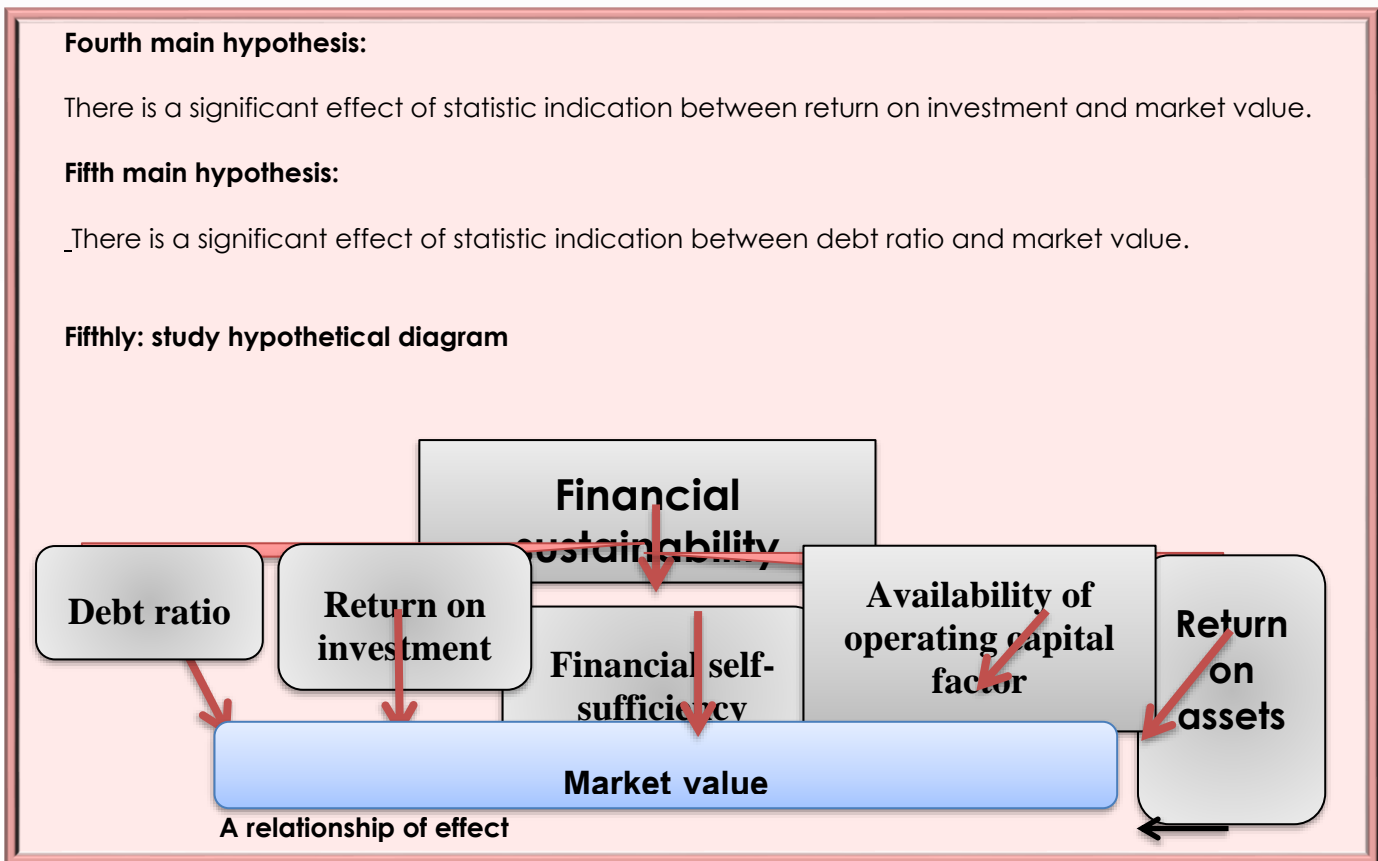
**Fourth main hypothesis:**

There is a significant effect of statistic indication between return on investment and market value.

**Fifth main hypothesis:**

\_There is a significant effect of statistic indication between debt ratio and market value.

**Fifthly: study hypothetical diagram**



**Figure (1)** Study hypothetical diagram



## Second theme: previous studies

### Firstly – previous studies about financial sustainability

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<b>(Büyükoçkan &amp; Karabulut, 2018) study</b>	
Details	Notes
Study title	Review of Accounting Sustainability Using Analytical Procedure: Applied Study on GCC Industrial Companies.
Study objective	Analyzing and developing sustainability indicators to serve accounting and financial sustainability philosophy.
Study <u>society</u> and sample	The study society_encompassed industrial companies in targeted Arabian Gulf countries (around 121 company).
Study tools and methods	Financial data obtained from the company were relied upon, yearly reports, management boards reports, financial and non-financial reports, and other statements related to the companies studied in 2012 were reviewed and analyzed.
Most prominent conclusions	Most of Arabian Gulf countries have strategic plans and financial planning but some of them were more liable to risks than others in finding alternative financial resources. Most companies worked on generating their own income, and they differed in their abilities to invest their resources. From this point there was a contrast in their abilities of accounting and financial sustainability.
<b>(Zabolotnyy &amp; Wasilewski, 2019) study</b>	
Details	Notes
Study title	The Concept of Financial Sustainability Measurement : A Case of Food Companies From Northern Europe.
Study objective	Creating a complex measure that can be used in evaluating the efficiency of the financial management in food companies.
Study society and sample	The study society was a sample of food companies in northern Europe.
Study tools and methods	Fuzzy logic was used to analyze this study.
Most prominent conclusions	The secondary indicator (financial sustainability indicator represented in value) rises when the company raises its profitability, its market capitalization and its production efficiency whereas the increase of cash and retained earnings, and reduction of debt and reduction of interest rates costs enhance continuity indicator in these companies.

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### Secondly- previous studies about market value :

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<b>(Cravino, Lan, &amp; Levchenko, 2020) study</b>	
Details	Notes
Study title	The relationship between earnings distribution policies and market value of share and their effect on trading volume “ a study in a sample of banks registered in Iraq's securities market.”
Study objective	Measuring the relationship between earnings distributions policy and market value of share, and also demonstrating the effect of earning distribution policy and market value of share on trading volume in banks.
Study society and sample	The study focused on a sample of banks registered in Iraq's securities market.
Study tools and methods	SPSS version (22) program was used to extract study conclusions.
Most prominent conclusions	1- Trading volume of share plays a great and important role in changing shares prices, when shares prices rise, then the increase of trading volume is desirable and needed, but in the case of prices reduction, then reducing trading volume is desirable. 2- The existence of the variables of earnings distributions of the one share and market value of the one share affects trading volume, and

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		therefore, we conclude that there is a significant effect of the variables on traded value.
(Yemi & Seriki, 2018) study		
Details		Notes
Study title		Retained Earnings and Firms' market value: Nigeria experience.
Study objective		Identifying retained earnings effects on market value of listed firms after controlling share earnings, earnings distributions, and financial leverage in the context of Nigeria's securities market.
Study sample	society and	The sample comprised of (75) non-financial firms listed in Nigeria's securities market for duration (2003-2014).
Study methods	tools and	Two main methods of multiple linear regression models were used to identify the relationship between the main variables.
Most conclusions	prominent	The existence of a positive and significant relationship between retained earnings and share earning and earnings distributions and firms' value whereas market value is positive but insignificant and it's related to financial leverage.

## Second subject: theoretical aspect

### First theme: financial sustainability

#### The concept of financial sustainability:

The concept of financial sustainability is considered a relatively new one, that is, this term appeared after the concept of sustainable development. A part of this concept is related to economic unity and its financial and economic aspects according to company theory. (It's a study to understand how companies work and to control internal and external variables which helps in their continuity and increasing their fortunes and resources effectively) (Jones, 2013). Financial sustainability means the smoothness of financial companies work that strive to achieve what they need of profitability and cash sufficiency to cope with any challenges that can make them liable to bankruptcy, in other words, financial sustainability means the company's ability to cover its current costs and costs resulting from its development if it decides to expand the scale of its business. (Marwa & Aziakpono, 2015). Thus, financial sustainability is a process that is not independent from company's other processes and that was stressed by (Ebenezer, Musah, & Ahmed, 2020) when he described financial sustainability as "a correlated series of work methods that are affected by economic, social, political, environmental and technological factors and the linkage between the company and the outer environment, that is, it isn't fixed but it is an economic, social, political and technological entity that is continuously changing and developing which can make work methods unstable, and this can be achieved with time if the management started making changes because it represents the highest authority in the company, and therefore, they are needed to change its organizational structure and it's part of financial sustainability".

#### Financial sustainability indicators:

Before starting identifying financial sustainability indicators, it should be known that there aren't fixed indicators for financial sustainability issued from international or local organizations as the case with audit standards, even Global Reporting Initiative (GRI) and the Sustainability Accounting Standards Board (SASB) standards are not more than standards and indicators and they are a non-binding guide for companies and there are no specific standards or indicators that they adopt for continuity of their current operating processes and their future commitments, and a company is free to adopt the indicators that it finds convenient for financial sustainability (Ebenezer et al., 2020).

**Table (1)**

Shows a group of definitions by researchers and writers

N	Researcher and year	Definition
1	Nyamsogoro (2010)	Ability to continue towards achieving financial goals without external support.
2	Ek (2011)	Guaranteeing continuity of the company
3	Bayai and Ikhide (2016)	Company's ability to manage its financial matters in order to be able to keep its expenditure commitments now and in the future.
4	Al Kharusi (2017)	Company's ability to work, and develop and sustain its budget of assets and needs in the internal and external changing environment and guaranteeing its solvency and attractiveness for long-term investment within acceptable limits of risks.
5	Osazefua Imhanzenobe (2020)	Financial manager's ability to supervise expected financial comparisons and observe them with awareness of long-term risks.

**Source:** prepared by the researcher depending on the sources mentioned in it

### In this study we will depend on five indicators for financial sustainability:

#### Return on assets:

It's an indicator that measures the efficiency of a company's use of its assets in generating earnings, and it's calculated by the division of net income (after taxes) on assets average (Leite, Mendes, & Sacramento, 2019), this quotient shows the company's efficiency in operating its assets on the basis of earnings generated from the overall assets, and the return on assets indicator is determined by two indicators:

- 1- Profit margin which the degree of the company's efficiency in cost management.
- 2- Assets use and it's known as using assets and it indicates the best use of the company's assets.

And it's calculated as follows: (Cernostana, 2018)

Return on assets = net income/ overall assets

#### Availability of operating capital factor:

Net operating capital is defined as the current assets minus current needs, so if the organization was able to produce a minimum production that is more than the net operating capital, then it will be considered efficient in its management (Al Kharusi, 2017), that is, the availability of operating capital indicates achieving financial sustainability through current assets / ownership rights (shares holders), whereas the reduction of operating capital indicates that all operating capital is resulted from loans (Pulatovich, 2019).

Availability of operating capital factor = current assets/ ownership rights

#### Financial self-sufficiency

It is an indicator that measures the company's ability to work without support or help and it is considered the situation in which all operating costs, other costs and the degree to which they cover the self-generated income in the company are studied, and financial self-sufficiency refers to whether the company earns enough operating incomes that cover its overall costs or not (Osei-Kuffour & Peprah, 2020). It's the quotient of dividing financial incomes on operating costs as follows : (Henock, 2019).

Financial self-sufficiency = operating income/ operating costs.

### **Return on investment:**

It's an estimate of the expected financial flow whereas the longest achieved return in fact is the incomes generated from the investment process, and therefore, the contrast between the achieved and the expected from the investment is considered an objective risk that rises or lessens with lessening or rise of the contrast between the achieved and the expected from the investment (Billingsley, Gitman, & Joehnk, 2016). Average return on assets can be applied on return on investment, and it can measure the overall efficiency of management in achieving earnings from its overall investments, for it's a measure for profitability of all short-term and long-term company's investments (Mahajan & Mahajan, 2021). The more this ratio increases, the more it shows the efficiency of the company's management in using shares holders' assets to achieve an income that satisfies them, and this ratio is one of the most important financial ratios in securities market because it reflects the profitability of the one share, and its increase contributes to maximization of share's market value (Mushrif Rashid, Jasim, & Fadhil Saleh, 2021).

The return on investment can be calculated as shown in the following equation: (Gangadhar, 2006).

Return on investment = net earnings after taxes/ overall invested assets.

### **Debt ratio:**

It's the degree to which the company depend on loaning from financial and banking companies to finance its assets, and therefore, the fixed costs of the company in this case will be its debt interests whereas if the company offers preferred shares, the fixed costs will be then the preferred shares earnings that the company will pay the preferred shares holders, that is, the preferred shares enjoy guaranteed. It measures the ratio of overall assets that are financed by loaners, the more this ratio increases, the more it means that this company uses others' assets to achieve its earnings. Debt ratio is calculated using the following equation. (Gitman, Juchau, & Flanagan, 2015).

Debt ratio = overall needs/ overall assets

## **Second theme: market value**

### **The concept of market value**

Share's market value is considered of the standards and indicators that are used to show market value, that the goal of maximizing company value is considered of the main goals of financial management, and share's market value is of many fluctuations because it changes according to the financial situation in the organization or general economic circumstances and the size of supply and demand for this share in particular. The rise in shares' market value reflects a movement of promotion and a growth in economy, on the contrary, the reduction of their value is interpreted as a negative indicator that reflects a movement of depression. Thus, ordinary share's value can be viewed as a criterion of performance and a measure from owners' point of view and company's value can be estimated on the basis of market price of its shares, however, maximizing this value is not easy to achieve, it's one of the main concerns of the company's management, namely, its financial management. Hence, the investor in the financial market views this value as an indicator of the company's success or failure (Benzion, Tavor, & Yagil, 2009). That is, it's share's trading value in securities market and it moves up and down based on share's demand and supply factors, besides, economic circumstances and company's work outcomes in addition to competitions play a main role in affecting the share's price (Ek, 2011).

We can summarize some of market value concepts from the viewpoints of a number of researchers and writers in table (2).



N	Research and year	Definition
1	<a href="#">Clout (2007)</a>	It's raw shares' price in the end of financial year multiplied by the number of traded shares in the same period. The number of traded shares can be extracted from the company's yearly reports whereas raw shares' prices are the prices that are published in financial magazines and papers.
2	<a href="#">Nyangaka (2012)</a>	It's the current price listed in the market which investors buy and sell a quotient of the ordinary shares at it in a particular time and it's what investors want to pay.
3	<a href="#">Ehalaiye, Tippett, and van Zijl (2017)</a>	It's the expected value of the company's shares which will be equal to the current value of financial flows in the future and it should be closely equaled with the fair value of its net assets.
4	<a href="#">Mačerinskienė and Survilaitė (2019)</a>	It's the outcome of company's shares multiplied by the traded price of the one share.
5	<a href="#">Alsufy, Afifa, and Zakaria (2020)</a>	It's shares' prices in the end of each year, and the market value of ordinary shares is its value in financial markets and it's specified through trading shares depending on supply and demand principle.

**Source:** prepared by the researcher depending on the sources mentioned in it

#### Factors affecting market value:

Company's' value is affected by many factors that affect its market value, of these factors are company's profitability, capital structure and company's development ([Putri & Triyonowati, 2020](#)). And there are many factors affecting market value, of which are:

#### Profitability:

The more profitability increases, the more performance increases where companies of the highest profitability are considered more capable of future performance, and more capable of efficiently managing their costs. Company's value depends on the strength of the incomes that it owns which is represented in its ability to achieve and make earnings through sales or what is called (net profit margin), and also in its ability to continue investing its assets to increase its sales or what is called (assets turnover), that is, the more the company was able to reduce its costs such as (sales cost, managerial and general costs), the more its profitability will increase ([AlGhusin, 2015](#)). So profitability is company's ability to achieve earnings during its operation, that is, the more a company's profitability growth was higher, the better its performance will be, the more its value will increase and the more it will attract investors ([Putri & Triyonowati, 2020](#)).

#### Development:

Development or company's development ratio is the size of difference between current assets and last year's assets, companies of high development ratio can enter markets easily or they can loan from financial companies to get good financing for their investment projects where they depend on external financing and they pay part of the earnings through earnings distributions afterwards. On the contrary, it's hard for small companies of high and continuous development to enter financial markets and get loans from financial companies to support its investment projects ([Ogaili, 2020](#)).



### **Capital structure:**

The capital structure decision refers to choosing between a mixture of internal and external resources to finance all activities of a company in what leads to maximization of its value, whereas investment decision refers to (managing long-term investments, planning, and identifying investment chances that achieve the greatest possible income for the company). (De Villiers & Sharma, 2020).

**(GOH, HENRY, & ALBERT, 2021) referred to two main factors affecting market value:**

### **Interest rate:**

Interest rate is one of the indicators that affect a company's decision about expenditure and raising loans. So when interest rates are low, companies tend to raise loans to expand their business which increases its shares' prices in this period. There is a negative relationship between the rise in shares' prices and interest rates.

### **Exchange rates:**

the concept of exchange rates risks results from uncertainty risks, that is, the rise in hard currency value reduces competition, and Exchange rates fluctuations affects companies' market value but that's according to their exposure to exchange rates and their dealings in these rates. So, local companies are affected by exchange rates indirectly through economic effect on overall demand.

### **Third subject: practical aspect**

For testing theories of financial sustainability effect on market value based on fixed-effects model, we notice from analysis results shown in [table \(18\)](#) that financial sustainability affects market value based on fixed-effects model. F-statistic indication reaching (4.72) at level of significance (0.000017) was lower than (0.05) level. To identify the effects of financial sustainability indicators on market value, a fixed-effects model test was conducted and its results are shown in [table \(\)](#) where they were as follows:

From the results in [table \(\)](#), we notice regarding the first indicator of financial sustainability indicators represented in (return on assets) that a significant T value appeared for return on assets indicator where T-statistic reached (5.928) at level of significance (0.0041) and it's lower than level of significance (0.05). And with indication of t-statistic value which appeared positive, and it refers to a direct relationship between the variables, that is, every time the return on assets increases one unit, market value will increase by (2.8) and the effect is significant at a level lower than (0.05). This gets along with the first hypothesis which stipulates the existence of a significant effect between return on assets and market value.

Whereas regarding the second indicator of financial sustainability indicators represented in (availability of operating capital factor), a significant T value appeared for availability of operating capital factor where t-statistic reached (-6.719) at level of significance (0.0026) and it's lower than level of significance (0.05). And with indication of t-statistic value which appeared negative, and it refers to an inverse relationship between variables, that is, every time availability of operating capital factor increases one unit, market value will lessen by (0.17) and this effect is significant at a level lower than (0.05). This gets along with the second hypothesis which stipulates the existence of a significant effect between availability of operating capital factor and market value.

Besides, the results of the third indicator of financial sustainability indicators represented in (financial self-sufficiency factor) a significant T value for financial self-sufficiency indicator where t-statistic reached (3.629) at level of significance (0.0222) and it's lower than level of significance (0.05). And with indication of t-statistic value which appeared positive which refers to a direct relationship between variables, that is, every time financial self-sufficiency factor increases one unit, market value will increase by (0.26) and this effect is significant at a level lower than (0.05). This gets along with the third hypothesis which stipulates the existence of a significant effect between financial self-sufficiency and factor and market value.

Whereas regarding the fourth indicator of financial sustainability indicators represented in (return

on investment), an insignificant T value appeared for return on investment indicator where t-statistic reached (0.78) at level of significance (0.48) and it's higher than level of significance (0.1). And with indication of t-statistic value which appeared negative, and it refers to an inverse relationship between variables, that is, every time return on investment increases one unit, market value will lessen by (0.007) and this effect is insignificant at a level lower than (0.1). This doesn't match with the fourth hypothesis which stipulates the existence of a significant effect between return on investment and market value.

Lastly, regarding the fifth indicator of financial sustainability indicators represented in (debt ratio), results have shown a significant T value for debt ratio indicator where t-statistic reached (4.77) at level of significance (0.0089) and it's lower than level of significance (0.05). And with indication of t-statistic value which appeared positive, and thus, it refers to a direct relationship between variables, that is, every time debt ratio increases one unit, market value will increase by (3.7) and this effect is significant at a level lower than (0.05). This gets along with the fifth hypothesis which stipulates the existence of a significant effect between debt ratio and market value.

**Table (3):**

Fixed-effects model results of financial sustainability effect on market value

Significance of fixed-effects model		Coefficient of determination	Level of significance	t test	Estimated information	Independent variables
Result	Level of significance					
			0.0000	36.275	9.054	Coefficient of intersection
			0.0041	5.928	2.839	Return on assets
			0.0026	-6.719	-0.168	Availability of operating capital factor
			0.0222	3.629	0.258	Financial self-sufficiency factor
	0.000017	4.719	0.4809	-0.777	-0.007	Return on investment
معنوي		0.227	0.0089	4.766	3.708	Debt ratio
						Fixed-effects model

**Source:** prepared by the researcher depending on the outputs of (Eviews.9) program

## Conclusions:

- 1- There's a debate over the concept of financial sustainability and no specific conception was identified for it, in addition, there are several indicators to measure it, and therefore, there is no specific model to use in measurement.
- 2- There's a contrast between levels of financial sustainability in sample companies despite using different indicators, which indicates problems in companies' financial sustainability.
- 3- The study verified the validity of each of the first, second, third, and fifth hypotheses that stipulate the existence of a significant effect of statistic indication between financial sustainability and market value indicators of the companies that are listed in Iraq's securities market during the study's period.
- 4- Regarding the fourth hypothesis, it wasn't verified as valid and it stipulates the existence of a significant effect of statistic indication between return on investment and market value during the study's period which means the inability of a company to manage investments in the right

way that works on maximizing return on these investments and in the way that works on reducing market value to the lowest level.

### Recommendations:

- 1- The necessity of specifying a unit of measurement in Iraq's securities market to measure companies' financial sustainability for it provides an acceptable level of financial solvency, cash, profitability, eligibility for raising a loan and other financial indicators such as achieving long-term financial balance, and therefore it wards off future problems in the market.
- 2- Companies that are listed in Iraq's securities market are required to create training courses and workshops to obtain knowledge about how to measure companies' financial sustainability in order to focus on the company's message and not only on its daily continuity.
- 3- Companies that haven't achieved the required financial sustainability must reconsider its adopted policy in managing the company in order to reach what the companies that are listed in Iraq's securities market have reached of acceptable levels of financial sustainability.
- 4- The need to conduct more researches to reach a convenient measure that is to be adopted in measuring financial sustainability.

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